

A (Very Incomplete) Brief History of Everything

To put everything in context, let's take a little trip from Genesis to the present. The following timeline is not meant to be comprehensive, but it hits enough key points to invoke the texture of our terrain. Herman Hesse won the 1946 Nobel Prize for Literature for his 1943 novel, *The Glass Bead Game*. One of the characters in the book tells us, "Studying history, my friend, is no joke and no irresponsible game. To study history one must know in advance that one is attempting something fundamentally impossible, yet necessary and highly important. To study history means submitting to chaos and nevertheless retaining faith in order and meaning." I couldn't agree more.

Epoch 1: Back in the Day

- ▷ 13,770,000,000 years ago: A Big Bang occurs.
- ▷ 4,600,000,000 years ago: The sun ignites.
- ▷ 4,540,000,000 years ago: Earth is born.
- ▷ 3,600,000,000 years ago: The oldest known life on Earth appears.
- ▷ 200,000 years ago: Anatomically modern humans appear.
- ▷ 80,000 years ago: Modern *homo sapiens* appear in Africa.
- ▷ 50,000 years ago: Humans appear in North America.
- ▷ 42,000 years ago: The approximate date of the oldest known musical instruments.
- ▷ 14,000 BCE to 2585 BCE: Agriculture, the wheel, first civilizations, etc., etc.
- ▷ 2584 BCE: Construction begins on the Great Pyramid of Giza in Egypt.
- ▷ 570 BCE: Pythagoras is born (harmony of the spheres, musical ratios and harmonic relationships; refer to Figure 1.1).
- ▷ 500 BCE to 1449 CE: A lot happens.

NOTE: Keep in mind that these dates from pre-history are estimates based on the best current information.

Epoch 2: Recent History

- ▷ 1450: Gutenberg invents the printing press, allowing for printed sheet music...and with it, the birth of the music industry.
- ▷ 1492: Columbus gets lost looking for India and lands in modern-day Hispaniola.
- ▷ 1600: William Gilbert's *De Magnete*, the first modern book on electricity and magnetism, is published.
- ▷ 1687: Newton publishes "Principia," which asserts that gravity is a predictable force of nature (among other breakthroughs).
- ▷ 1747: Benjamin Franklin discovers the electricity principle of "charge conservation."
- ▷ 1809: The first known telegraph appears.
- ▷ 1843: Ada Lovelace writes the first computer algorithm, for Charles Babbage's Analytical Engine, to calculate Bernoulli numbers.
- ▷ 1857: Édouard-Léon Scott de Martinville patents the phonautograph, the first known sound-recording device (see Figure 2.2).

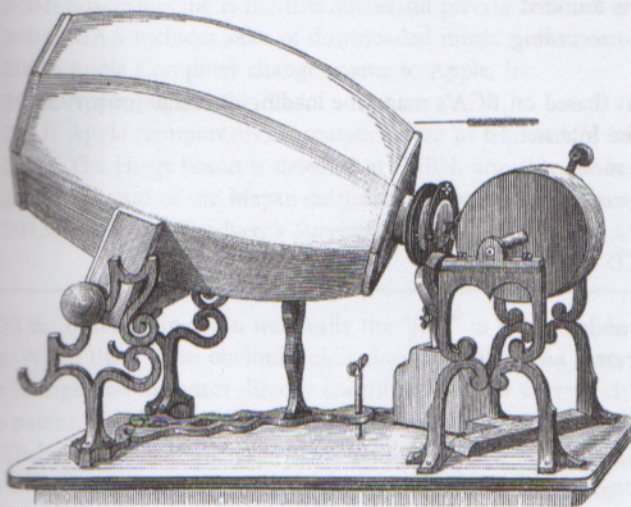


Figure 2.2 The phonautograph is the first known sound recording device. Drawing of 1859 model in Franz Josef Pisko's, *Die neuere Apparate der Akustik* (Vienna, 1865).

Source: Public domain, courtesy of the David Giovannoni Collection (firstsounds.org).